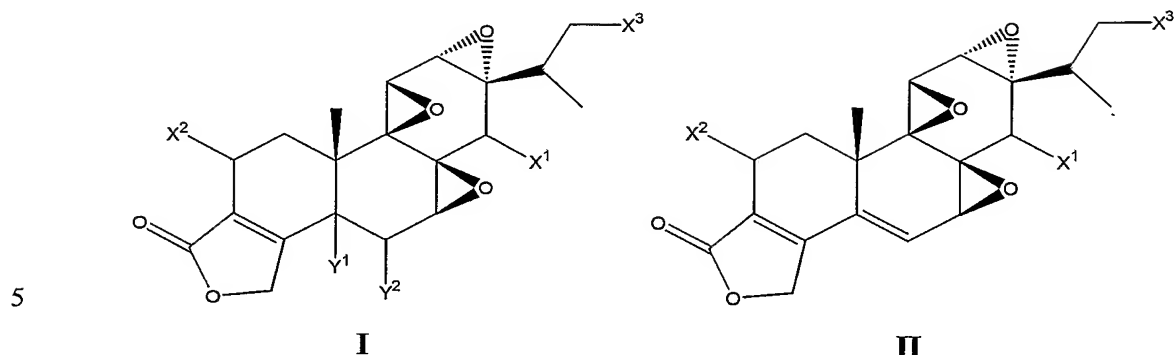


IT IS CLAIMED:

1. A compound having the structure I or II:



where

- $X^1$  is  $OR^1$ , where  $R^1$  is selected from hydrogen,  $C(=O)R^2$ , and  $C(=O)OR^2$ , where  $R^2$  is selected from alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, aralkyl, hydroxyalkyl, alkoxyalkyl, aryloxyalkyl, and acyloxyalkyl;
- 10  $X^2$  and  $X^3$  are independently  $OR^1$  or hydrogen, at least one of  $X^2$  and  $X^3$  being hydrogen; and where

- (i)  $Y^1$  is hydrogen and  $Y^2$  is selected from the group consisting of hydroxyl, halogen, cyano, nitromethyl, ethenyl,  $-CH_2COOR^4$ ,  $N(R^4)_2$ , and  $SR^4$ , where each  $R^4$  is independently selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, aralkyl, hydroxyalkyl, alkoxyalkyl, aryloxyalkyl, and acyloxyalkyl, or, in the case of  $N(R^4)_2$ , taken together form a 5- to 7-member heterocyclic ring whose ring atoms are selected from the group consisting of carbon, nitrogen, oxygen and sulfur, wherein the ring atoms include at most 3 heteroatoms; or
- 15 (ii)  $Y^1$  is hydroxyl and  $Y^2$  is selected from the group consisting of hydrogen, hydroxyl, halogen, cyano,  $N(R^4)_2$ , and  $SR^4$ ; or
- (iii)  $Y^1$  and  $Y^2$  taken together form an epoxide ring.
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2. A compound as recited in claim 1, where  $R^1$  is selected from hydrogen and  $C(=O)R^2$ .
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3. A compound as recited in claim 2, where  $R^2$  is selected from alkyl, aryl, aralkyl, and alkoxyalkyl.

4. A compound as recited in claim 3, where  $R^2$  is selected from lower alkyl, phenyl, and benzyl.
5. A compound as recited in claim 2, where  $R^1$  is hydrogen.
6. A compound as recited in claim 1, wherein each of  $X^2$  and  $X^3$  is hydrogen.
7. A compound as recited in claim 1, having the structure **II**.
8. A compound as recited in claim 7, wherein each of  $X^2$  and  $X^3$  is hydrogen.
9. A compound as recited in claim 1, having the structure **I**.
10. A compound as recited in claim 9, wherein each of  $X^2$  and  $X^3$  is hydrogen.
11. A compound as recited in claim 10, wherein  $Y^1$  is hydrogen and  $Y^2$  is selected from the group consisting of hydroxyl, halogen, cyano, nitromethyl, ethenyl,  $-\text{CH}_2\text{COOR}^4$ ,  $\text{N}(\text{R}^4)_2$ , and  $\text{SR}^4$ .
12. A compound as recited in claim 11, wherein  $Y^2$  is hydroxyl, fluoro, chloro, bromo, cyano,  $-\text{CH}_2\text{COOR}^4$ , or  $\text{N}(\text{R}^4)_2$ .
13. A compound as recited in claim 12, wherein  $Y^2$  is hydroxyl, fluoro, chloro, bromo, or cyano.
14. A compound as recited in claim 13, wherein  $Y^2$  is hydroxyl.
15. A compound as recited in claim 13, wherein  $Y^2$  is cyano.
16. A compound as recited in claim 10, wherein  $Y^1$  is hydroxyl and  $Y^2$  is selected from the group consisting of hydrogen, hydroxyl, halogen, cyano,  $\text{N}(\text{R}^4)_2$ , and  $\text{SR}^4$ .

17. A compound as recited in claim 16, wherein Y<sup>2</sup> is hydrogen, hydroxyl, fluoro, chloro, bromo, or cyano.

5 18. A compound as recited in claim 17, wherein Y<sup>2</sup> is hydrogen.

19. A compound as recited in claim 17, wherein Y<sup>2</sup> is hydroxyl.

20. A compound as recited in claim 10, wherein Y<sup>1</sup> and Y<sup>2</sup> taken together form an  
10 epoxide ring.

21. A compound as recited in claim 1, wherein the groups defined as R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup>,  
when selected from alkyl, alkenyl, and alkynyl, have up to six carbon atoms; when  
selected from cycloalkyl, have 3 to 7 carbon atoms; when selected from cycloalkenyl,  
15 have 5 to 7 carbon atoms; and when selected from aralkyl, hydroxyalkyl, alkoxyalkyl,  
aryloxyalkyl, and acyloxyalkyl, have alkyl components having up to six carbon atoms.

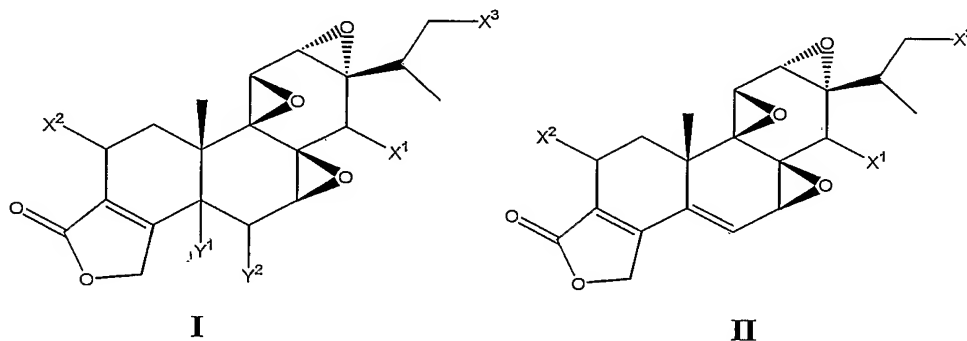
22. A compound as recited in claim 21, wherein said alkyl, alkenyl, and alkynyl groups or  
components have up to four carbon atoms.

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23. A compound as recited in claim 21, wherein said alkyl, alkenyl, and alkynyl groups or  
components have one or two carbon atoms.

24. A compound as recited in claim 1, wherein each of the groups defined as R<sup>2</sup>, R<sup>3</sup>, and  
25 R<sup>4</sup> is independently selected from alkyl, aryl, aralkyl, and alkoxyalkyl.

25. A method of effecting immunosuppression, comprising administering to a subject in need of such treatment, an effective amount of a compound of formula I or II:



where

$X^1$  is  $OR^1$ , where  $R^1$  is selected from hydrogen,  $C(=O)R^2$ , and  $C(=O)OR^2$ , where  $R^2$  is selected from alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, aralkyl, hydroxyalkyl, alkoxyalkyl, aryloxyalkyl, and acyloxyalkyl;

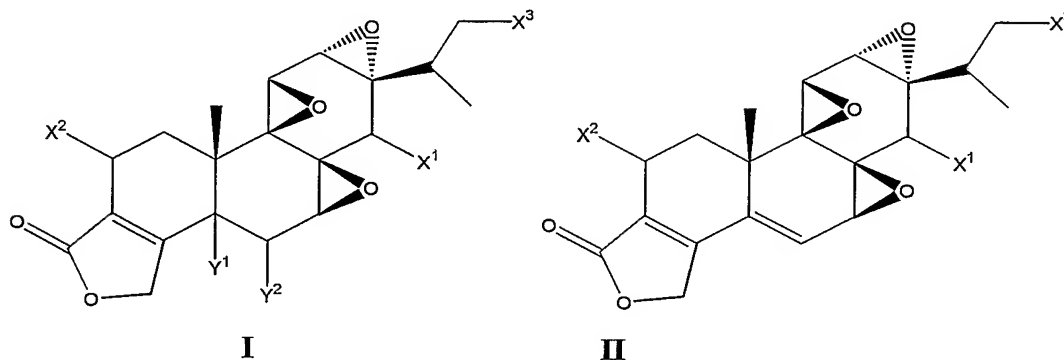
$X^2$  and  $X^3$  are independently  $OR^1$  or hydrogen, at least one of  $X^2$  and  $X^3$  being hydrogen; and where

(i)  $Y^1$  is hydrogen and  $Y^2$  is selected from the group consisting of hydroxyl, halogen, cyano, nitromethyl, ethenyl,  $-CH_2COOR^4$ ,  $N(R^4)_2$ , and  $SR^4$ , where each  $R^4$  is independently selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, aralkyl, hydroxyalkyl, alkoxyalkyl, aryloxyalkyl, and acyloxyalkyl, or, in the case of  $N(R^4)_2$ , taken together form a 5- to 7-member heterocyclic ring whose ring atoms are selected from the group consisting of carbon, nitrogen, oxygen and sulfur, wherein the ring atoms include at most 3 heteroatoms; or

(ii)  $Y^1$  is hydroxyl and  $Y^2$  is selected from the group consisting of hydrogen, hydroxyl, halogen, cyano,  $N(R^4)_2$ , and  $SR^4$ ; or

(iii)  $Y^1$  and  $Y^2$  taken together form an epoxide ring.

26. A method of inducing apoptosis in a cell, comprising contacting said cell with an effective amount of a compound of formula **I** or **II**:



where

$X^1$  is  $OR^1$ , where  $R^1$  is selected from hydrogen,  $C(=O)R^2$ , and  $C(=O)OR^2$ , where  $R^2$  is selected from alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, aralkyl, hydroxyalkyl, alkoxyalkyl, aryloxyalkyl, and acyloxyalkyl;

$X^2$  and  $X^3$  are independently  $OR^1$  or hydrogen, at least one of  $X^2$  and  $X^3$  being hydrogen; and where

(i)  $Y^1$  is hydrogen and  $Y^2$  is selected from the group consisting of hydroxyl, halogen, cyano, nitromethyl, ethenyl,  $-CH_2COOR^4$ ,  $N(R^4)_2$ , and  $SR^4$ , where each  $R^4$  is independently selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, aralkyl, hydroxyalkyl, alkoxyalkyl, aryloxyalkyl, and acyloxyalkyl, or, in the case of  $N(R^4)_2$ , taken together form a 5- to 7-member heterocyclic ring whose ring atoms are selected from the group consisting of carbon, nitrogen, oxygen and sulfur, wherein the ring atoms include at most 3 heteroatoms; or

(ii)  $Y^1$  is hydroxyl and  $Y^2$  is selected from the group consisting of hydrogen, hydroxyl, halogen, cyano,  $N(R^4)_2$ , and  $SR^4$ ; or

(iii)  $Y^1$  and  $Y^2$  taken together form an epoxide ring.